

**BUREAU OF INDIAN AFFAIRS
BRANCH OF FIRE MANAGEMENT**

TRIP REPORT

**BURNED AREA EMERGENCY REHABILITATION (BAER)
TOUR OF BAER PROJECTS IN ALBUQUERQUE AND PHOENIX AREAS
April 19th, 1999-April 23rd, 1999**

On April 19th, 1999 to April 23rd, 1999 staff of the Branch of Fire Management conducted a field trip to the southwestern United States, to review burned area emergency rehabilitation (BAER) projects and to attend the national BAER team meeting. Rich McCrea, BIA BAER Coordinator and Steve Haglund, Director of Fire management visited several sites. A summary of activities is listed below:

April 19th, 1999: Attended the National BAER Team Meeting

Review of the Oso Fire BAER project, Santa Clara Pueblo, Northern Pueblos Agency

- Differences in resource management objectives between private lands, Forest Service lands, and Indian lands were significant.
- The Santa Clara Tribe was somewhat overwhelmed by the scope and the complexity of the fire and the BAER organization. They did not realize how much time and information was needed to complete a BAER plan.
- Teams need to be aware of differences between management on Indian land and Federal lands.
- The Oso BAER plan development. The teams experience on other BAER projects was greatly helpful.
- Tom Gavin National BAER Team
 - S Dispatch of the Team was flawless
 - S Interagency cooperation between the US Forest Service Espanola Ranger District, The BIA Northern Pueblos Agency and Albuquerque Area Office , the Santa Clara Tribe and the BAER Team was excellent.
 - S The BAER Incident Command Post was supported by Northern Pueblos Agency who did an excellent job.
 - S GIS support and products were excellent.
 - S Cooperation between the BAER Team and private landowners was very good.
 - S The BAER team did an excellent job of completing the forest assessment for Santa Clara Pueblo and the US Forest Service Espanola Ranger District.
 - S 20 or more archeologists were on the Oso Fire initially and many of them were used by the BAER team.
 - S The BAER Team fully interfaced with the Type 1 Incident Management Team.

The coordination went very smoothly.

- S The majority of the BAER team demobilized before the rain started to fall and significant erosion started to occur. Some of the team members were on site when there was significant erosion going on which included rock and mud slides.
- S There was no interface between the US Forest Service Comptroller and the BAER team after repeated efforts by the BAER team leader to meet with them.

- Road maintenance funds may have been needed for other roads outside the Santa Clara Canyon.
- Need to evaluate the two fishing ponds and the needs for dredging. The one pond is full of sediment and an amendment may have to be done to cover the cost. No dredging will be done until the sedimentation process stops.
- Fencing was a concern by the Tribe. The common fence between the US Forest Service and the Pueblo was damaged.
- Northern Pueblos Agency developed a position description and advertised for a BAER project coordinator. There have been no applicants. The PD rated out at a GS-11 but no one has applied. PD has been done by the Park Service a GS 7/9/11 for Rehab positions. Mesa Verde and Bandolier hired BAER coordinators for their projects. Need to have the BAER coordinator hired by the National Office so the advertisement can be done at a national level. There are options for hiring the coordinator such as a term position or possibly a contractor.
- A small portion of burned area has already been salvage logged. The logging contract is in the process of being signed.
- Need to prioritize projects with the Santa Clara Tribe.
- Some funds were made available for fencing from BAER funds.
- Since 1996 Albuquerque Area has hosted 3 BAER teams on three large fires.
- Concern by tribes for rehab work outside Indian lands and how that may effect their lands. Across-boundary coordination is needed. Concerns are for soil erosion from other Federal Lands that may have not been treated. Other federal agencies need to be aware of concerns of adjacent Indian land owners.
- The forest officers report for the timber salvage sale, made extensive use of the BAER forest assessment.
- US Forest Service View of the Oso Fire as presented by Gene Omken, District Ranger and Mary Orr District Biologist.
- S Need to identify areas where there is a stabilized landscape where no erosion will occur. Also need to identify priority areas and areas where return might be marginal.
- S Santa Clara Pueblo has identified concerns with the US Forest Service. The tribe identified 500 or more trees to be planted per acre.

- S No reforestation effort has been initiated. The Forest Service has no seed bank to get the project started.
- S Fencing. Concerns with that. Not sure if EFR funds can be used for fencing and to what extent. Need to work with their neighbors to get the job done. Need to prevent problems before they happen.
- S Forest Service salvage timber sales. 3 sales were set up. 120 acres under 20% slope only and was done only in the winter. Many 12 inch trees and under were left on site. No new roads were constructed and some old ones were opened up. No reforestation was done. Aspen regeneration is coming back in some of the areas.
- S Communication difficulties. These have been addressed. District people will be rested during these large fire events and will be prepared for the BAER teams during this large fire events.
- S Primary objectives of the District is to work with the Tribe as far as natural resource and cultural issues. Visual resources are also quite important.
- S Safety is a huge concern on these BAER projects.
- S Cost leadership must be kept in mind and doing a professional job.
- S Human dimension is most important that goes with the good science.
- S There is need to have trainees and mentors for all of these tasks.
- S 11 major rain fall events happened in 10 days on the Oso.

April 20th: Toured the Oso Fire, Santa Clara Pueblo. The Oso fire occurred in June of 1998 and burned 5000 acres on several jurisdictions including Santa Clara Pueblo, US Forest Service Santa Fe National Forest Espanola Ranger District.

- Visited the lower two ponds on Santa Clara Canyon. Some siltation has occurred and it is heavy in some spots. The Tribes desires to dredge the ponds. Concerns are for the native cutthroat trout.
- Damage has occurred to the main canyon road from small landslides and washouts that have come down into the canyon from the burn above it.
- Most of the hillside has been stabilized and the erosion is minimal at this time.
- Much of the area appeared to recovered with grasses and forbs.

April 21st, Toured the Mt. Archuleta Mesa Fire, Jicarilla Apache Reservation and Southern Ute Reservation.. The Mt Archuleta Fire (Dipping Vat complex) occurred in 1996 in June and burned over 15,000 acres on several jurisdictions including Jicarilla Agency, Southern Ute Agency, private lands and the Bureau of Land Management.

Key Contacts:

- Jim Friedley, Forester, Southern Ute Agency
 - Steve Thomas, Forester, Southern Ute Agency
 - Carl Romnes, Fire Management Officer, Jicarilla Agency
 - Marvin Olson, Forest Manager, Jicarilla Agency
 - Doug Bryce, Forester, Jicarilla Agency
 - Mark Wright, Roads Engineer, Jicarilla Tribe
 - Jeff Nelson, Forester, Southern Ute Agency
 - Bev Schwab, Forester, Albuquerque Area Office
 - Sherryl Vigil, Superintendent
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- **Seguro Canyon Area, Mt Archuleta Mesa Fire .** The fire appeared to burn very intensely throughout most of the canyon area. Most of the trees were killed in this area but the grass and shrubs have recovered on most slopes
 - S** Woody debris in the stream channel is a concern. However the group seemed to feel it should be left in place.
 - S** Monies are available for repairing roads after natural disasters from the Federal Highway Administration. The Jicarilla Roads Dept. is looking into this.
 - S** A follow up review of roads maintenance needs was completed on August 14th and costs for completing this were done. These documents need to be submitted through the Area Office to the NIFC office.
 - S** Rock rip rap is need by many culverts.
 - S** A coordinator is needed on these large BAER projects. That would greatly benefit the program.
 - S** New springs have appeared in some areas along the road and culverts are needed in those spots.
 - S** Most of the flooding and erosion occurred in 1996 a few weeks after the fire. Significant flooding also occurred in 1997, but a gradual decrease was noted as time went on. Flooding and erosion was minimal in 1998.
 - S** In many areas the Seguro Canyon road is located in the bottom of the canyon which is very narrow. In some locations the road is even lower than the creek.

- **Mount Archuleta Fire Tour (continued)**

S Monies for reforestation of the Mt. Archuleta Burn were provided through a special Congressional Appropriation. In addition 50% of the revenues from the timber sale salvage were given by the Tribe to put into reforestation totaling \$ 750,000. BAER funds were not utilized (as per BAER policy).

S **Contour felling.** It appeared to be effective in most areas. In some areas soils were trapped on the uphill side of the log and grasses were well established there. Agency representatives generally felt it was a worthwhile effort.

S **Straw Bale Check dams.** These were also viewed as being generally effective and most did not wash out.

S **Reforestation:**

Reforestation survival was not high 1997 and 1998 due to damage by rodents and elk. Costs for reforestation are estimated at 550 dollars per acre. (400 trees per acre). It may be appropriate to wait for a few years for the ecosystem to stabilize before beginning tree planting again. Possibly the rodent population will diminish by then and the Elk pressure will not be that intense. Steeper slopes will not be planted with trees. Reforestation estimates made by Tom Gavins BAER team were invaluable. The BAER team estimated there would need to be 1,550 acres of reforestation. This estimate was used by the Branch of Forestry to ask for an special budget appropriation from Congress.

S **Salvage Logging:**

Salvage logging did contribute to a minimal amount of erosion on the site. However in the long term the overall net effect was positive due to the amount of slash put on the ground which clearly helped capture and break up overland flow of water and provided much need microsites for tree planting. Salvage logging did disturb some of the contour tree falling. Better coordination and timing is needed in the future. Overall it did not have much effect on erosion.

S **General Fire Effects:**

Several existing pine plantations were overrun by the fire killing a majority of the seedlings. Gambel oak has resprouted in many areas of the fire along with grasses and forbs.

S **Riparian Areas**

Replanting of cottonwoods and willows was discussed. The representatives felt that this would be a beneficial restoration project. No funds were provided by BAER for these efforts because they were restoration and not rehabilitation. Planting of these type of plants would further hold sediment in the stream channel.

S **Grass Seeding**

The high intensity burn areas were aerial seeded two times. Grasses have reestablished themselves in most areas except on some of the rocky steep slopes. Effectiveness of aerial seeding versus natural recovery is hard to judge.

S Tribal Funding

The Southern Ute Tribe committed 100% of the timber salvage revenues to various reforestation projects. The Jicarilla Tribe committed 50% of the timber salvage revenues to various reforestation projects.

Summary:

- BAER projects need to have a coordinator funded for the duration of the project to insure that reports are completed, individual projects are done in a timely manner, and funds are tracked.
- BAER funding for the Seguro Canyon Road. A request needs to be submitted through the Albuquerque Area Office.
- Funding for reforestation after large fires is needed to meet trust responsibilities.
- Reforestation efforts may have to be delayed on large fires due to impacts by rodents and big game.
- The planting of grass seed may impact reforestation projects in a negative manner by enhancing rodent populations and concentrating big game use.

April 22nd, Southern Ute Agency Site Visit

Key Contacts:

- Jim Friedley, Forester, Southern Ute Agency
 - Ken Van Zee, Forest Manager
 - Bob Roberts, Assistant Fire Management Officer
 - Jeff Nelson, Forest Development Officer, Southern Ute Agency
 - Bev Schwab, Forester, Albuquerque Area Office
 - Dan Breuninger, Superintendent
 - Stewart Herrera, Green House Manager
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- Toured the Southern Ute Green house. The facility is in excellent shape and has had many significant improvements. Both conifers and shrubs are being grown.
 - Toured the Black Ridge Fire Area. The area has recovered and has very good grass, forb and shrub growth. It did not appear that any erosion has taken place recently. The Black Ridge fire was grass seeded one time to ensure that adequate cover would be maintained. Private lands were grass seeded twice using non BAER funds under another program. The staff felt this was a necessity and that it was a very effective treatment. Pinyon Pine were planted throughout most of the burn area on a 40 by 40 foot spacing (109 per acre). Costs were estimated at approximately \$150 per acre and a total of 867 acres were planted on better PJ sites with nothing on over 40%

slope. Two small areas were planted with ponderosa pine on a 10 by 10 spacing at 415 per acres (53 acres). Antelope bitterbrush was also planted but was a minor component (less than 10%) Overall survival was estimated at 60% for all the plantings that were done.

- Funding for reforestation efforts on the Black Ridge Fire was done through a combination of BAER funds, Tribal Funds and program funds. Additional monies were provided by the Global Releaf Program.
- There was no seed source for the Pinyon Pine after the fire and it was felt that plantings were needed to reestablish ecosystem function and structure.

April 23rd, Tour of the Palm Fire, Colorado River Agency

Key Contacts:

- Nate Shourds, Fire Management Officer, Phoenix Area Office
- Ron Miller, Woodlands Forester, Phoenix Area Office
- Lyn Levitt, Fire Management Officer, Bureau of Land Management
- Dr. Bertin Anderson, Revegetation and Wildlife Management Center
- Phillip E. Russell, Revegetation and Wildlife Management Center
- Rodney McVey, BIA, Colorado River Agency
- Jeff Hinkins, BIA, Colorado River Agency
- Donald Geesling, US Fish and Wildlife Service
- Conrad Kresge, BIA, Colorado River Agency
- S Jerry Orr, BIA, Fort Yuma Agency
- S Martin Esquerra, Colorado River Indian Tribes (CRIT) Fish and Game Department
- S John Levas, Colorado River Indian Tribes (CRIT) Fish and Game Department
- S Allen Anspach, Superintendent Colorado River Agency
- Toured the 'Ahakhav Tribal Preserve that consists of a nursery, environmental education office and a nature preserve. This is managed by the Colorado River Indian Tribes (CRIT) which includes 4 separate tribes. The preserve totals 1,042 acres of riparian area which is located along the Colorado River. This preserve is managed by Fred Phillips. 200 acres have been restored to mesquite and cottonwood in the last 3 years. The CRIT nursery grows Fremont cottonwood, screwbean mesquite, honey mesquite, ironwood, four-wing saltbrush, wolfberry, palm and Chilean Mesquite. The nursery is self supporting through commercial sales to businesses and the general public. The riparian areas that have been restored have cottonwood that are 30 to 35 feet 6 to 8 inches in diameter. A drip irrigation system was installed initially on this 200 acres but has been removed from the site because the plants can exist on their own. The environmental education is managed by Terry Shaffer.

- Tour of the Palm fire area. The area has been cleared of all new saltcedar sprouts using a dozer. Some saltcedar sprouts have reappeared on the site. Cottonwood and mesquite seedlings have been planted on the site and a drip irrigation system installed. The seedlings are doing very well and surveys are done each week to check on survival. If mortality is occurring then the drip irrigation is modified to ensure no more plants die. Prior to planting an extensive soil survey is conducted to measure salinity and other soil attributes at each planting site. Once the soil survey is completed it is then determined if mesquite or cottonwood is suitable to plant on the site and what specific locations will receive what types of plants. Prior to the Palm fire the area has heavily vegetated by saltcedar and mesquite.
- Tour of the Anjohn fire area. This fire occurred in March of 1999. It was vegetated by mesquite with some saltcedar in the area. The area burned with high intensity killing most of the trees.
- Summary
 - S CRIT has had great success with their riparian restoration projects
 - S Soil surveys to determine depth of the water table and salinity are critical to any restoration projects.
 - S The restoration activities at the 'Ahakhav Tribal Preserve was very successful. Irrigation is no longer needed and the long term prognosis looks very good for survival. Native vegetation is out competing the saltcedar and shading it out.
 - S There are many benefits to wildlife especially bird species from these riparian restoration projects.
 - S In areas that have been restored to native species the surface fuels are very light and consist of scattered leaf litter. Fires that occur in this area in the future will likely be of low intensity. The restored riparian areas effectively serve as green fuel breaks and would be quite efficient in stopping or slowing the spread of a fire along the river. This should reduce the cost of future wildland fire suppression.

General Summary of the Southwest BAER Tour:

- A BAER Coordinator on most large fires, needs to be identified. It is recommended that this position, usually be funded by BAER monies, for the duration of the project. This will resolve many problems and will make for a much more efficient operation. Many of the agencies and tribes have very small staffs and a large BAER project can quickly overwhelm them.
- The pilot project at Colorado River Agency is an excellent example of how funds should be used for rehabilitation and restoration. This pilot project may well be viewed as an excellent model for future expenditures of BAER funds and restoration funds.
- Reforestation funds are badly needed for planting of trees on commercial lands. Large fires have had a significant impact on Tribal economies.

- Planting of trees and shrubs to restore ecosystem function and structure is a high priority for tribes and agencies.
- Agencies and tribes are to be commended for the reforestation efforts they have undertaken and the greenhouse facilities that have been constructed. Tribes and agencies have utilized a wide variety of funding sources, including money from timber sales, to conduct reforestation, rehabilitation and restoration projects on fire areas. There is a great commitment by the field to getting the job done.
- Better tracking of funds is needed on a project by project basis. This was a weakness at some locations.
- BAER projects need to be completed in a timely manner and need to comply with BAER policy timelines. This was a weakness at some locations.
- The current BAER policy on planting of trees is confusing and needs to be clearly defined
- Tree and shrub planting projects are often long term in nature. It may take several year to complete the planting of an area for a variety of reasons. A long term commitment is needed by agencies and tribes to ensure the success of these projects.
- The national BAER teams are an integral part of the BIA's large fire rehabilitation program. They have provided for great consistency in the development of plans and implementation of policy.
- Federal managers need to recognize that Indian landowners may have resource management objectives that are quite different from their own. In addition tribes may have concerns over rehabilitation efforts that are undertaken (or not undertaken) on federal jurisdictions adjacent to Indian lands.